

Sea Level Rise

NASA Resources for Grades 3 to 5

3rd- 5th grade NGSS related to Sea Level Rise:

- 3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.
- 3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
- 3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change
- 3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
- 3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.
- 3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard
- 4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.
- 4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.
- 4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features
- 4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.
- 5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
- 5-ESS2-2. Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.
- 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
- 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- 3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

NASA Resources

Websites:

NASA's Climate Kids website:

- <https://climatekids.nasa.gov/sea-level/>

Lesson Plans:

Identifying Landforms and Bodies of Water on a Map

Connect the Spheres: Earth Systems Interactions

Lessons in Sea Level Rise

Activities:

Earth's Water Globe Activity

ICESat-2 Sea Ice Towers

Virtual Interactive Activities:

[Tour of the Electromagnetic Spectrum online book with videos](#)

Articles:

[Earth Observatory for Kids](#), known as EO Kids, is a NASA affiliated magazine for students, primarily focused on students aged 9 through 14. However, there are many articles and activities in these issues which might be interested and accessible for younger children.

- [EO Kids: Making and Melting Ice at Earth's Poles](#)
- [EO Kids: Ice on Earth: By Land and By Sea](#)
- [EO Kids: Freshwater issue](#)

The GLOBE Program's Elementary Storybook: [What in the World is Happening to our Climate? Water's Family Tree: Where Did Earth's Water Come From?](#) article

[Sea Level 101: What Determines the Level of the Sea?](#) blog

[Bevy of Biomes](#) learning poster

Videos:

["What is the Greenhouse Effect"](#) (2:29)

["What Causes Sea Level Rise?"](#) (2:43)

["Getting the Big Picture"](#) (2:39)

["Watching Rising Seas from Space"](#) (1:58)

["Sea Level Rise"](#) (1:30)

Data Visualizations:

[Draining the Oceans](#)